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MS 239 (1987) (English): SPECIFICATION FOR COCONUT OIL (FIRST REVISION)

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MALAYSIAN STANDARD

MS 239 : 1987

SPECIFICATION FOR COCONUT OIL (FIRST REVISION)

SIRIM STANDARDS & INDUSTRIAL RESEARCH INSTITUTE OF MALAYSIA

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The Malaysian Standards are subject to periodical review to keep abreast of progress in the industries concerned. Suggestion for improvements will be recorded and in due course brought to the notice of the Committees charged with the revision of the standards to which they refer.

The following references relate to the work on this standard:
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Committee representation

The Food and Agricultural Industry Standards Committee under whose supervision this Malaysian Standard was prepared, comprises representatives from the following Government Ministries, trade, commerce and manufacturer associations and scientific and professional bodies.

Federal Agricultural Marketing Authority
Federation of Malaysian Consumers Association
Federation of Malaysian Manufacturers
Malaysian Agricultural Research and Development Institute
Ministry of Agriculture (Agriculture Department)
National Chambers of Commerce and Industry of Malaysia
Oil Palm Growers' Council of Malaysia
Rubber Producers' Council of Malaysia
Rubber Research Institute of Malaysia
Universiti Pertanian Malaysia

The Technical Committee on Vegetable Oils and Oleaginous Products which prepared this Malaysian Standard consists of the following representatives:

Encik S. Krishnan (Chairman) Encik Velayuthan	Incorporated Society of Planters
Encik Tang Loon Boon/ Encik N. Saravanan	Federal Agricultural Marketing Authority
Encik Yong Moh Lim/ Encik Peng Chik	Federal Land Development Authority
Dr. Lim Pang Hon/ Encik Yee Kuan Hing	Federation of Malaysian Manufacturers
Encik K. Berger/ Encik T.P. Pantzaris/ Puan Siew Wai Lin	Palm Oil Research Institute of Malaysia
Encik Phang Kwong Thin/ Encik Low Thing	Malayan Edible Oil Manufacturers, Association
Encik Adinan Husin/ Puan A.H.G Chin	Malaysian Agriculture Research and Development Institute (Food Technology Division)
Encik Abdul Rahman Jaafar/ Encik Wazir Haron	Ministry of Primary Industries
Encik Ti Thiow Hee/ Puan Maharam Jusoh	Chemistry Department
Encik Aziz Zakaria/ Y.M. Raja Zainal Sulaiman	Malaysian Oil Palm Growers' Council
Encik Mohd Salleh Mohd Kassim/ Encik Wong Soo Khwan	Palm Oil Registration and Licensing Authority
Encik Tang Thin Sue/ Encik Joseph Moolayil	Palm Oil Refiners Association of Malaysia
Encik Muk Mun Tat (co-opted member)	Socfin Co. Bhd.
Puan Puziah Hashim Puan Soh Swee Keng/ Puan Saleha A. Jalil (Secretary)	Standards and Industrial Research Institute of Malaysia

FOREWORD

This Malaysian Standard was prepared by the Technical Committee on Vegetable Oils and Oleaginous Products under the authority of the Food and Agricultural Industry Standards Committee.

This revised Malaysian Standard supersedes MS 239 : 1974, 'Specification for coconut oil'.

In the preparation of this standard, the following publications were referred to:

(a) British Standard BS 628 : 1967, 'Specification for crude coconut oil'

(b) Indian Standard IS : 542-1963, 'Specification for coconut oil (Revised)'

(c) Philippines Trade Standard 412-07.01 : 1968, 'Standardisation of crude coconut oil and for other purposes'

SPECIFICATION FOR COCONUT OIL (FIRST REVISION)

1. SCOPE

1.1 This Malaysian Standard prescribes the requirements for coconut oil.

2. DEFINITIONS

For the purpose of this standard, the following definitions shall apply:

2.1 Crude coconut is the product obtained by expression and/or solvent extraction from the kernel (copra) of the coconut, *Cocos nucifera*, and shall be free from admixture with other oils and fats.

2.2 Refined coconut oil is obtained from crude coconut oil which has been refined by neutralization with alkali, bleached with bleaching earth or activated carbon or both the deodorised with steam; no other chemical agents being used.

3. GRADES

3.1 Coconut oil shall be of the following grades:

3.1.1 Crude

3.1.1.1 Grade 1

3.1.1.2 Grade 2

3.1.2 Refined grade

The refined grade, grade 1 and grade 2 are edible grades and do not require further processing.

4. REQUIREMENTS

4.1 **Description.** Coconut oil shall be the wholesome oil extracted from the fruit of *Cocos nucifera*. It shall be clear and free from rancidity, adulterants including mineral oil, sediment, suspended and other foreign matter and separated water.

4.2 Coconut oil may contain food conditioner and antioxidant as permitted by the Food Regulations.

4.3 **Clarity.** The clarity of coconut oil shall be such that there shall be absence of turbidity after keeping the filtered sample at 30°C for 24 hours.

4.4 **Admixture with other oils.** Coconut oil shall be free from admixture with other oils.

4.5 Coconut oil shall also comply with the requirements prescribed in table 1.

Table 1. Requirements for coconut oil

Item no.	Characteristics	Requirements		
		Crude		Refined
		Grade 1	Grade 2	
1.	Free fatty acids, calculated as lauric acid, % by mass, max.	1.0	3.5	0.1
2.	Moisture and insoluble impurities, % by mass, max.	0.50	0.50	0.10
3.	Iodine value (Wijs)	7.5 to 10.5	7.5 to 10.5	7.5 to 10.5
4.	Colour in a 133.35 mm (5.25 in) cell on the Lovibond tintometer scale, max.	3R	4R	1.5R
5.	Refractive index at 40°C	1.4480 to 1.4490	1.4480 to 1.4490	1.4480 to 1.4490
6.	Specific gravity at 30°C/30°C	0.915 to 0.920	0.915 to 0.920	0.915 to 0.920
7.	Saponification value, mg KOH/g	248 to 264	248 to 264	248 to 264
8.	Unsaponifiable matter, % by mass, max.	0.8	0.8	0.5

5. PACKING

5.1 Coconut oil, crude or refined, shall be supplied in suitable well-closed containers, as agreed upon between the purchaser and the supplier.

5.2 **Bulk shipment.** Coconut oil, crude or refined, in bulk shall be shipped in vessel deeptanks or wingtanks with steam coils, in tank-trucks, in lighters or other appropriate containers.

6. LABELLING

6.1 The containers shall be labelled with the following information:

6.1.1 Name and grade of the product;

6.1.2 Weight of the product;

6.1.3 Producer's name or trade-mark;

6.1.4 Month and year of manufacture or code;

6.1.5 Expiry date marking;

6.1.6 Country of origin.

6.2 Each container may, by arrangement with the Standards and Industrial Research Institute of Malaysia be marked with the Certification Mark of SIRIM, provided the product conforms to the requirements of this standard.

7. LEGAL REQUIREMENTS

7.1 The product shall in all other aspects comply with the requirements of the legislations currently enforced in the country.

8. SAMPLING AND TESTING

8.1 Representative samples of the coconut oil shall be drawn as prescribed in MS 252, 'Methods of sampling and test for oils and fats'.

8.2 Tests shall be carried out as prescribed in MS 252, 'Methods of sampling and test for oils and fats'.

9. COMPLIANCE

9.1 If on testing, each of the samples is found to conform to the requirements specified in this standard, the lot, batch or consignment from which the samples have been drawn shall be deemed to comply with this standard.

In this context, the term 'sample' shall be taken to include also 'Composite sample or samples' where appropriate as agreed upon mutually between seller and buyer.

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